

We claim:

1. A process for preparation of montelukast or a salt thereof, said process comprising reacting a late intermediate compound which is 2-[1-[1- R -3- [2- (7 chloro quinolin -2- yl) vinyl [phenyl] -3- [2 - methoxy carbonyl phenyl] propyl sulfonyl methyl] cyclo propyl] acetic acid or a salt thereof with methyl magnesium chloride or methyl magnesium bromide in an organic solvent.
2. The process of claim 1, further comprising reacting an earlier intermediate compound which is methyl 2 - (3 - R - (3- (2- (7- chloro 2- quinolinyl) - ethenyl) - 3 hydroxy propyl) benzoate with methane sulfonyl chloride or toluene sulfonyl chloride to obtain a mesylated or tosylated derivative of said earlier intermediate compound; followed by a reaction of said mesylated or tosylated derivative with 1-mercaptopo methyl cyclopropane acetic acid in a polar solvent in a presence of a base to obtain said late intermediate compound.
3. The process of claim 1, wherein said late intermediate compound is an amine salt of 2-[1-[1- R -3- [2- (7 chloro quinolin -2- yl) vinyl [phenyl] -3- [2 - methoxy carbonyl phenyl] propyl sulfonyl methyl] cyclo propyl] acetic acid.
4. The process of claim 1, wherein said late intermediate compound is a dicyclohexyl amine salt of 2-[1-[1- R -3- [2- (7 chloro quinolin -2- yl) vinyl [phenyl] -3- [2 - methoxy carbonyl phenyl] propyl sulfonyl methyl] cyclo propyl] acetic acid.
5. The process of claim 4, wherein said reacting step further includes treating said dicyclohexyl amine salt of 2-[1-[1- R -3- [2- (7 chloro quinolin -2- yl) vinyl [phenyl] -3- [2 - methoxy carbonyl phenyl] propyl sulfonyl methyl] cyclo propyl] acetic acid with an organic acid prior to the reaction with said methyl magnesium chloride or methyl magnesium bromide.
6. The process of claim 5, wherein said organic acid is acetic acid.
7. The process of claim 1, wherein said organic solvent is selected from the group consisting of tetrahydrofuran, diethyl ether, diisopropyl ether, 2-methoxy ethanol, toluene, ethyl benzene, 1,4-dioxane, and the mixtures thereof.
8. The process of claim 1, wherein said reacting step is carried out at a temperature ranging from about -10 °C to about 50 °C.

9. The process of claim 4, wherein said reacting step further includes converting said dicyclohexyl amine salt of 2-[1-[1- R -3- [2- (7 chloro quinolin -2- yl) vinyl [phenyl] -3- [2 - methoxy carbonyl phenyl] propyl sulfonyl methyl] cyclo propyl] acetic acid to a montelukast free acid, followed by a conversion of said montelukast free acid to an amine salt of montelukast.
10. The process of claim 9, wherein said amine salt of montelukast is tertiary butyl amine salt or phenyl ethylamine salt.
11. The process of claim 9, wherein said montelukast free acid is isolated from a solvent selected from the group consisting of toluene, ethyl acetate, acetonitrile, heptane, hexane and mixtures thereof, and purified by precipitating it from a solvent selected from the group consisting of toluene, methanol, ethanol, isopropanol, n-propanol, ethyl acetate, methyl acetate, acetonitrile and mixtures thereof.
12. The process of claim 9, further comprising converting said amine salt of montelukast to a sodium salt of montelukast.
13. The process of claim 1, wherein said starting compound is reacted with methyl magnesium chloride in a mixture of tetrahydrofuran and toluene.
14. The process of claim 2, wherein said base is selected from sodium methoxide, sodium ethoxide, sodium hydride and n-butyl lithium.
15. The process of claim 14, wherein said polar solvent is selected from the group consisting of methanol, dichloromethane, dimethylformamide and mixtures thereof.
16. A process for preparation of montelukast sodium comprising:
  - (i) providing a solution of starting montelukast free acid in a halogenated solvent, aromatic solvent, or mixtures thereof;
  - (ii) treating said solution with an alcoholic base to convert said montelukast free acid into a sodium salt of montelukast;
  - (iii) adding a cyclic or acyclic hydrocarbon solvent to said solution thereby precipitating said sodium salt of montelukast.
17. The process of claim 16, wherein said starting montelukast free acid is generated in situ from an amine salt of montelukast in the presence of an organic acid.
18. The process of claim 16, wherein said halogenated solvent is selected from the group consisting of chloroform, dichloromethane, and dichloroethane.

19. The process of claim 16, wherein said halogenated solvent is dichloromethane.
20. The process of claim 16, wherein said aromatic solvent is selected from the group consisting of toluene, ethyl benzene or xylene.
21. The process of claim 20, wherein said aromatic solvent is toluene.
22. The process of claim 16, wherein said organic acid is acetic acid.
23. The process of claim 16, wherein alcoholic base is selected from the group consisting of sodium hydroxide, sodium methoxide or sodium ethoxide in methanol, ethanol, propanol, butanol, 2-propanol or tert-butanol.
24. The process of claim 16, wherein alcoholic base is methanolic sodium hydroxide.
25. The process of claim 17, wherein said amine salt of montelukast is tertiary butyl amine salt or phenyl ethylamine salt.
26. The process of claim 16, wherein said hydrocarbon solvent is selected from the group consisting of cyclohexane, hexane, n-heptane and mixtures thereof.
27. The process of claim 17, further comprising reacting 2-[1-[1- R -3- [2- (7 chloro quinolin -2- yl) vinyl [phenyl] -3- [2 - methoxy carbonylphenyl] propyl sulfonyl methyl] cyclo propyl] acetic acid or a salt thereof with methyl magnesium bromide or methyl magnesium chloride in toluene, tetrahydrofuran, diethyl ether or diisopropyl ether to obtain said amine salt of montelukast.